

Date: March 8, 2011

To: Thomas J. Bonfield, City Manager

Through: Theodore L. Voorhees, Deputy City Manager

From: Donald F. Greeley, Director, Water Management  
Jerry F. Morrone, Utility Engineering Supervisor  
James E. Harding, Civil Engineer IV, Water Management

Subject: System Improvements Engineering Design Services Project  
Contract Amendment #3

**Executive Summary**

On September 17, 2007, a contract for the System Improvements Engineering Design Services Project was awarded to Kimley-Horn & Associates (KHA) for design and construction services for three projects: Erwin Water/Fulton Sewer Replacement, Southern Reinforcing Main Phase I, and Hillandale Dual Waterline (HDWL) Replacement. Design and construction for the first two projects are complete. Construction of the HDWL Phase I is approximately 47% complete and design of HDWL Phase II is approximately 40% complete.

During work on the contract, two amendments were executed to increase funds (Amendment #1) and project time (Amendment #2). The reason for these amendments was to design and construct two additional projects requiring a higher priority than the projects first envisioned by the original contract. These projects were Cary Interconnection at NC54, and several improvements at the water reclamation facilities.

This amendment, #3, is for additional construction services needed during the above noted projects and an increase in the scope of the HDWL Phase II project. The limit of Phase II has been extended, as discussed below, by approximately 3100 feet (see Exhibit #1).

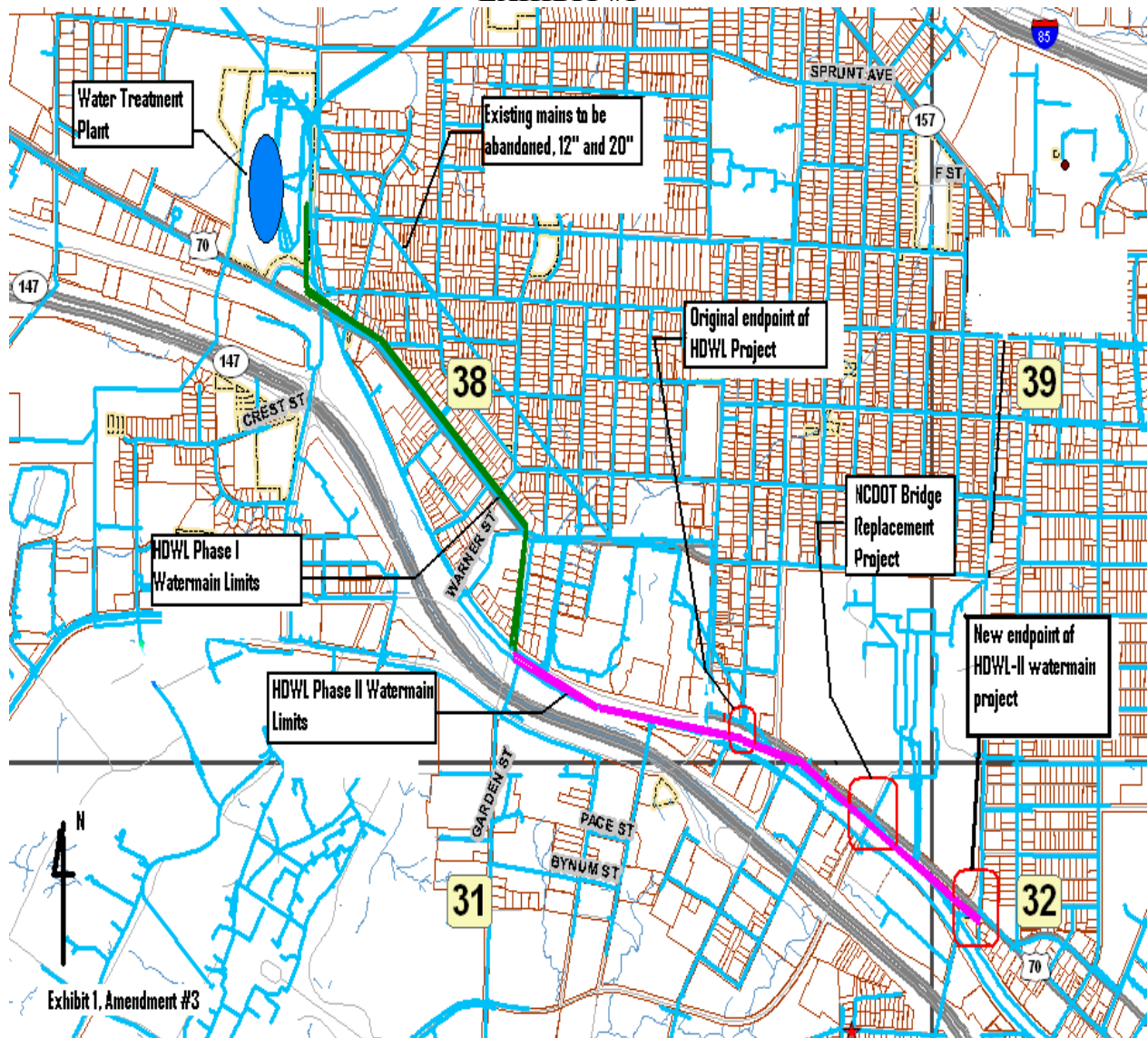
The portion of watermain being added consists of a segment along Main St. including a bypass of the Main St./ Campus Dr. bridge, which is being replaced by NCDOT. In a meeting on February 11, 2011, NCDOT indicated the need to complete construction of the Main St. and bypass segments before an ARRA-funded NCDOT resurfacing project, due to occur in the fall 2011. If this segment is not paved, NCDOT runs the risk of losing some of the ARRA funding. Following the meeting it was agreed upon by the City and NCDOT that the most efficient means to achieve timely design and construction of this segment is for the City's current engineer, KHA, to prepare the bid and construction documents and for the City to construct it, under the HDWL Phase II project. NCDOT will reimburse the City for all the

design and construction costs for portions of Amendment #3 related to bypass segment, estimated to be approximately \$125,000 for design. At this point a cost estimate for construction has not yet been done. However, as each of these tasks are completed, actual costs will be reimbursed.

**Recommendations:**

The Department of Water Management recommends that the City Council authorize the City Manager to execute Contract Amendment #3 with Kimley-Horn & Associates, of Cary, NC, for System Improvements Engineering Design Services Project, in the amount of \$741,370.45.

**EXHIBIT #1**



**Background:**

As mentioned in the Executive Summary, the original contract consisted of three projects: Erwin Water/Fulton Sewer, Southern Reinforcing Main, Phase I and Hillandale Dual Waterline Replacement. It was envisioned that the three projects would be sequenced to overlap the design and construction related services. Due to changes in the scope and the addition of the Cary Interconnection and water reclamation facility improvements projects, the design and construction work occurred much more in series, and Amendments #1 and #2 were the result. As mentioned in Amendment #2, additional work scope changes were expected to occur, and there would be a need for additional financial amendment.

Amendment #3 consists of costs for the work scope changes referenced in Amendment #2, as well as the increase in the scope related to the Hillandale project. The original project, 7000 feet long, was to terminate near Main St. and Iredell St. During the course of design NCDOT notified the City of a bridge replacement/utility relocation project at the Main St. bridge over Campus Dr. The City owns a 12" and a 20" watermain hung beneath the roadway bridge, which are being replaced by the new 36" HDWL main. NCDOT has recently negotiated with Duke University, owner of the property north of the replacement bridge project, an acceptable route of the new 36" watermain.

Knowing that the City's ultimate goal is to replace the 100-year-old watermains from the Williams WTP to beyond downtown, it was decided during the previous Amendments' timeframes to extend the HDWL project to the eastern (far) end of the NCDOT project. Essentially, KHA would design the new watermain and terminate it near Main St. at Buchanan Blvd., and NCDOT would be responsible for design of the bypass segment around the bridge project.

On February 11, 2011, NCDOT informed the City that they have obtained funds, thru ARRA, to pave Main St. from Ninth Street and extend eastward, through and beyond the bridge project. There is an expectation that the paving be completed in 2011; otherwise they may lose the funding. NCDOT indicated they could not undertake the design and construction of the new main in this timeframe. The idea of KHA undertaking the design and handling construction of the water main all along Main St. including the route around the bridge project was discussed and all parties agree that this would be very prudent, efficient and acceptable.

As part of the Municipal Agreement between the City and NCDOT, NCDOT is responsible for, and therefore will reimburse the City for all costs for design and construction within the footprint of the bridge replacement project. KHA is prepared to track the costs between the projects separately.

**Issues and Analysis:**

The current contract cost is \$2,052,783.00. This proposed amendment, for \$741,370.45, would be a 36% extension, of which approximately \$125,000.00 will be reimbursed by NCDOT. The approval of this additional cost will enable Kimley-Horn & Associates to

prepare and provide engineering plans, specifications, and construction related services for the additional system improvements.

**Alternatives:**

One alternative would be to not move forward with the additional system engineering design services. This alternative would not address the need to continue replacement of the deteriorated transmission mains which supplies water from the Williams WTP to the downtown areas, and beyond. These additions to the Contract are in the best interest of the water systems due to the need for boosting our water system's performance.

**Financial Impacts:**

There are currently funds available for this project in the Water Distribution System Rehabilitation Account, 4100P007-764000-P0B01. The necessary funds will be transferred to the account 4100P007-731900-P0B01, via Journal Entry #90666. This Amendment #3 is for \$741,370.45

**SDBE Summary**

The Equal Opportunity/Equity Assurance Department reviewed the proposal submitted by Kimley-Horn and Associates, Inc. of Cary, North Carolina to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. The goals for this project are MSDBE 1% and WSDBE 1%. It was determined that Kimley-Horn and Associates, Inc. is in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

**SDBE REQUIREMENTS**

Kimley-Horn and Associates, Inc. will subcontract to the following certified firms:

<b>Firm</b>	<b>ID</b>	<b>City/State</b>	<b>Amount</b>	<b>% of Contract</b>
Monarch Services	MSDBE	Durham, NC	\$ 60,000	8%
Tierra, Inc.	WSDBE	Raleigh, NC	\$ 30,000	4%

The MSDBE and WSDBE goals were exceeded.

**WORKFORCE STATISTICS**

Workforce statistics for Kimley-Horn and Associates, Inc. are as follows:  
(Consolidated)

Total Workforce	2360	
Total Females	774	(33%)
Total Males	1586	(67%)
Black Males	53	(2%)
White Males	1344	(57%)
Other Males	189	(8%)
Black Females	55	(3%)
White Females	630	(26%)
Other Females	89	(4%)